

RAG1AP1 (S-13): sc-138576

BACKGROUND

RAG1AP1 (RAG1-activating protein 1), also known as SLC50A1 (solute carrier family 50 (sugar transporter), member 1), is a 221 amino acid multi-pass membrane protein that belongs to the RAG1AP1 family. RAG1AP1 may stimulate V(D)J recombination by the activation of RAG-1. Existing as three alternatively splice isoforms, the RAG1AP1 gene is conserved in canine, mouse, rat, zebrafish, fruit fly, mosquito, *C. elegans* and *A. thaliana*, and maps to human chromosome 1q22. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1 and, considering the great number of genes, there are also a large number of diseases associated with chromosome 1. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. A breakpoint has been identified in 1q in which it disrupts the DISC1 gene and is linked to schizophrenia. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Tagoh, H., et al. 1996. Molecular cloning and characterization of a novel stromal cell-derived cDNA encoding a protein that facilitates gene activation of recombination activating gene (RAG)-1 in human lymphoid progenitors. *Biochem. Biophys. Res. Commun.* 221: 744-749.
2. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
3. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
4. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
5. Hennah, W., et al. 2006. Genes and schizophrenia: beyond schizophrenia: the role of DISC1 in major mental illness. *Schizophr. Bull.* 32: 409-416.
6. Seenundun, S., et al. 2007. Time-dependent rescue of gene expression by androgens in the mouse proximal caput epididymidis-1 cell line after androgen withdrawal. *Endocrinology* 148: 173-188.
7. Chen, L.Q., et al. 2010. Sugar transporters for intercellular exchange and nutrition of pathogens. *Nature* 468: 527-532.

CHROMOSOMAL LOCATION

Genetic locus: SLC50A1 (human) mapping to 1q22.

SOURCE

RAG1AP1 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RAG1AP1 of human origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138576 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RAG1AP1 (S-13) is recommended for detection of RAG1AP1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RAG1AP1 (S-13) is also recommended for detection of RAG1AP1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for RAG1AP1 siRNA (h): sc-88714, RAG1AP1 shRNA Plasmid (h): sc-88714-SH and RAG1AP1 shRNA (h) Lentiviral Particles: sc-88714-V.

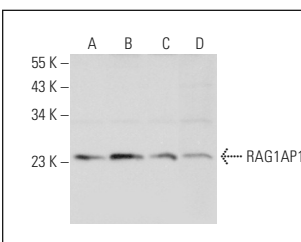
Molecular Weight of RAG1AP1 isoforms 1/2/3: 25/19/19 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

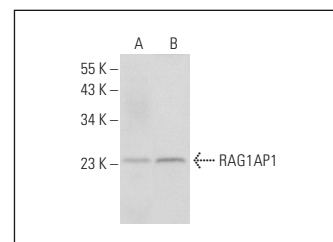
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RAG1AP1 (S-13): sc-138576. Western blot analysis of RAG1AP1 expression in MCF7 (A), HeLa (B), Jurkat (C) and A549 (D) whole cell lysates.



RAG1AP1 (S-13): sc-138576. Western blot analysis of RAG1AP1 expression in human cerebellum tissue extract (A) and U-87 MG whole cell lysate (B).

RESEARCH USE

For research use only, not for use in diagnostic procedures.